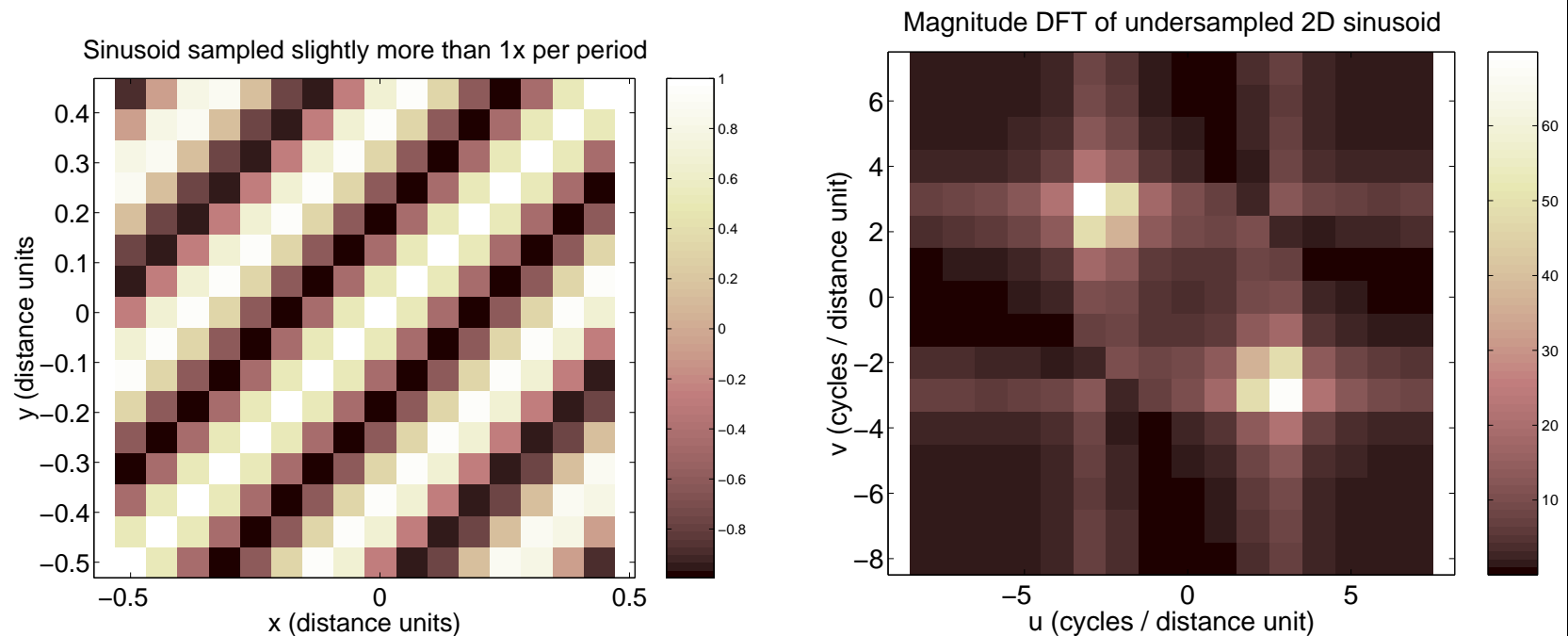


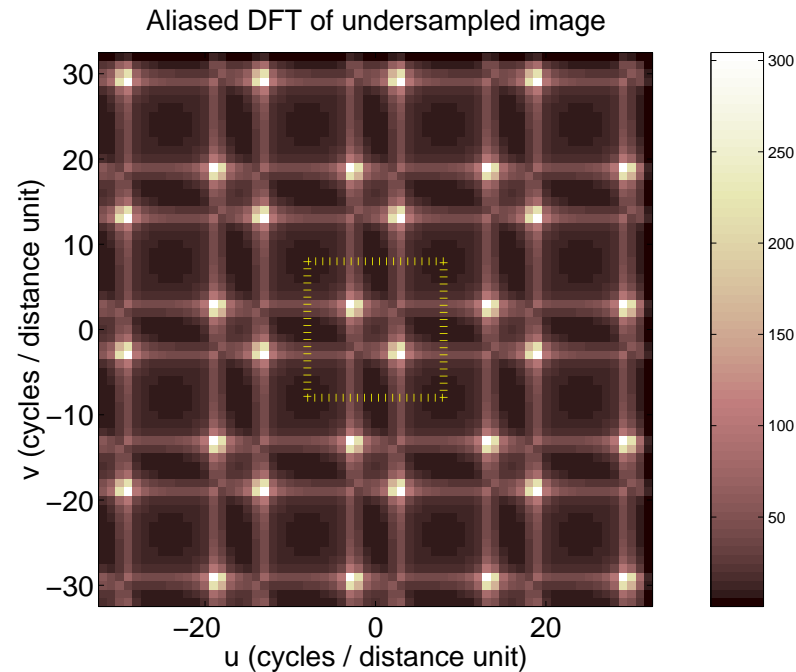
## 2D aliasing example

- Below is the downsampled image and its magnitude spectrum:



- We can clearly see that the frequency of the bands in the image is lower than that of the original image.
- Is aliasing a linear or a non-linear effect? \_\_\_\_\_

## 2D aliasing example



- The dotted lines enclose the 1st period of the spectrum of the  $16 \times 16$  downsampled image.
- This is the same spectrum that we found by DFTing the downsampled image in the previous slide.
- Conclusion: Aliasing is a predictable artifact of undersampling.